



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/496,588	02/02/2000	Manabu Hyodo	0879-0253P	6457
2292	7590	02/03/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			HENN, TIMOTHY J	
PO BOX 747			ART UNIT	PAPER NUMBER
FALLS CHURCH, VA 22040-0747			2612	

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

<b>Application No.</b> 09/496,588  <b>Examiner</b> Timothy J Henn	<b>Applicant(s)</b> HYODO ET AL.
	<b>Art Unit</b> 2612

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 02 February 2000.  
     2b) This action is non-final.  
 2a) This action is FINAL.  
     3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,9 and 10 is/are rejected.  
 7) Claim(s) 3-8 and 11-16 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 02 February 2000 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) All   b) Some \* c) None of:  
         1. Certified copies of the priority documents have been received.  
         2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.  
 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
     a) The translation of the foreign language provisional application has been received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_

- 4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Specification***

1. The disclosure is objected to because of the following informalities: On page 9, Line 26 the phrase "predetermined value (10EV)" is confusing. It is unclear whether this is meant to be 10 times an exposure value or an exposure value of 10.

Appropriate correction is required.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The office notes that the title should make mention of the fact that the white balance is adjusted based upon a determination of a type of illuminating light source.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyano (US 5,659,357) in view of Okino (US 4,847,680).

### **[claim 9]**

5. In regard to claim 9, Miyano discloses an automatic white balance device which includes a luminance level determining device (Figure 9A, Note luminance input), an

Art Unit: 2612

image plane dividing device (Figure 9A, Item 1; Column 8, Lines 37-49), a color information acquiring device that acquires color information of each of the areas (Figure 9A, Item 1; Column 8, Lines 37-49), a determination frame setting device that sets at least one determination frame indicating at least a color distribution range of a light source (Figure 9A, Items 2, 3, 18; Figures 3, 4 and 11), a number of areas finding device that finds a number of areas belonging to the determination frame in accordance with the color information of each of the areas acquired by the color information acquiring device (Figure 9A, Items 16, 17; Column 16, Lines 53-67) and a light source type determining device (Figure 9A, Item 18; Figure 10; Column 17, Lines 45-59) which determines a type of light source (Sunset) based upon the number of areas belonging to the determination frame found by the number of areas finding device. Therefore it can be seen that Miyano lacks a light source type-determining device, which determines a light source, based upon a luminance value.

6. Okino teaches an automatic white balance determining device which makes an initial determination as to whether or not a luminance level is greater than a threshold value, and if it is not, sets a flash device to operate and sets the white balance to a value corresponding to the flash light (Figure 4). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the luminance level detecting and operating device of Okino with the white balance device of Miyano to quickly make a decision as to the type of light source and set optimal white balance parameters when the flash device is operated to illuminate a subject instead of

going through lengthy processing to determine proper white balance parameters.

**[claim 1]**

7. Claim 1 is a method claim corresponding to apparatus claim 9. Therefore, claim 1 is analyzed and rejected as previously discussed with respect to apparatus claim 9.

8. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okino (US 4,847,680) in view of Miyano (US 5,659,357) as applied to claims 1 and 9 above, and further in view of Tsujimoto (US 6,201,932).

**[claim 10]**

9. In regard to claim 10, note that Okino in view of Miyano discloses an automatic white balance device, which meets the requirements, set forth in claim 9 as discussed above. Therefore, it can be seen Okino in view of Miyano lacks a determination frame, which is specified by a range of the color information, which is a ratio R/G, and a ratio of B/G. However, it is well known in the art that ranges of ratios R/G and ratios B/G can be used to specify determination frames for the purposes of light source identification, one such example can be found in Tsujimoto (Figure 3). Therefore; It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a range of ratios R/G and ratios B/G for the determination frames of Okino in view of Miyano instead of the DI and DG frames to be able to use data which specifies ranges of R/G and B/G as determination frames without the need to convert the data to DI and DG ranges.

**[claim 2]**

10. Claim 2 is a method claim corresponding to apparatus claim 10. Therefore, claim 2 is analyzed and rejected as previously discussed with respect to apparatus claim 10.

***Allowable Subject Matter***

11. Claims 3-8 and 11-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**[claims 3-8 and 11-16]**

12. In regard to claims 3-8 and 11-16, the prior art does not teach or fairly suggest an automatic white balance method which adjusts a white balance after classifying sections of a total image into blocks based upon a shade determination frame, wherein the shade determination frame is restricted to areas of which luminance is not more than a predetermined luminance.

***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art further shows the current state of the art in white balance systems.

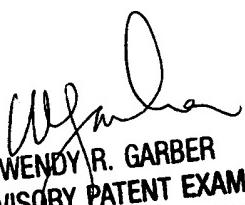
- |      |                 |              |
|------|-----------------|--------------|
| i.   | Haruki et al.   | US 5,282,022 |
| ii.  | Kim             | US 5,430,482 |
| iii. | Yamamoto et al. | US 5,481,302 |
| iv.  | Abe             | US 5,567,194 |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J Henn whose telephone number is (703) 305-8327. The examiner can normally be reached on M-F 7:30 AM - 5:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

TJH  
1-5-2004

  
WENDY R. GARBER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600